## **ELP and Science Standards Alignment**

### Science and Engineering **Practices** Asking Questions and

- **Defining Problems**
- **Developing and Using Models**
- **Planning and Carrying Out** Investigations
- **Analyzing and Interpreting**
- **Using Mathematics and Computational Thinking**
- **Constructing Explanations** and Designing Solutions
- **Engaging in Argument from Evidence**
- Obtaining, Evaluating, and **Communicating Information**

#### Disciplinary Core Ideas

- LS1: From Molecules to Organisms: Structures and Processes
- LS2: Ecosystems: Interactions, Energy, and Dynamics
- LS3: Heredity: Inheritance and Variation of
- LS4: Biological Evolution: Unity & Diversity
- PS1: Matter and Its Interactions
- PS2: Motion and Stability: Forces and Interactions
- PS3: Energy
- PS4: Waves and Their Applications in **Technologies for Information Transfer**
- ESS1: Earth's Place in the Universe
- ESS2: Earth's Systems
- **ESS3: Earth and Human Activity**
- **ETS1: Engineering Design**

#### **Crosscutting Concepts**



**Patterns** 



Cause and Effect



Scale, Proportion, and Quantity



Systems and System Models



**Energy and Matter** 



Structure and **Function** 



Stability and Change

#### Nebraska ELP Standards

#### Table 1. Organization of the ELP Standards in Relation to Participation in Content-Area Practices

1 1	construct meaning from oral presentations and literary and informational text through grade-appropriate listening, reading, and viewing
<b>2</b> i	participate in grade-appropriate oral and written exchanges of information, ideas, and analyses, responding to peer, audience, or reader comments and questions
3	speak and write about grade-appropriate complex literary and informational texts and topics
. 4.	construct grade-appropriate oral and written claims and support them with reasoning and evidence
5	conduct research and evaluate and communicate findings to answer questions or solve problems
6 8	analyze and critique the arguments of others orally and in writing
7	adapt language choices to purpose, task, and audience when speaking and writing
	determine the meaning of words and phrases in oral presentations and literary and informational text
9 (	create clear and coherent grade-appropriate speech and text
10	make accurate use of standard English to communicate in grade- appropriate speech and writing

Standards 1 through 7 involve the language necessary for ELLs to engage in the central content-specific practices associated with ELA & Literacy, mathematics, and science. They begin with a focus on extraction of meaning and then progress to engagement in these practices.

Standards 8 through 10 home in on some of the more micro-level linguistic features that are undoubtedly important to focus on, but only in the service of the other seven standards.

Link to 2017 Nebraska's College and Career Ready Standards for Science

# Science Lesson Planning Template K-2 Rubric 3-12 Rubric

Grade Level	Lesson	Focus and Standards
Kindergarten	Kindergarten Lesson	Ecosystems: Animals, Plants, and Their Environment Science Standard: Gather, analyze, and communicate evidence of interdependent relationships in ecosystems.  ELP Standard:  ELP 5 An ELL can conduct research and evaluate and communicate findings to answer questions or solve problems.
1st Grade	1st Grade Lesson	Space Standard: Gather, analyze, and communicate evidence of patterns and cycles of space systems. ELP Standard: ELP 5 An ELL can conduct research and evaluate and communicate findings to answer questions or solve problems.
2nd Grade	2nd Grade Lesson Graphic Organizer	Interdependent relationships in ecosystems Standard: Gather, analyze, and communicate evidence of interdependent relationships in ecosystems. ELP Standard: ELP 2 Participate in academic conversations ELP 4 Construct a claim with reasons and evidence
3rd Grade	3rd Grade Lesson Squirrels of Nebraska Images	Inheritance and Variation: Life Cycles and Traits Standard: Gather and analyze data to communicate an understanding of inheritance and variation of traits through life cycles and environmental influences.  ELP Standard:  ELP 4 Construct a claim with reasons and evidence
4th Grade	4th Grade Lesson	Energy: Conservation and Transfer Standard: Gather, analyze and communicate evidence of energy conservation and transfer. ELP Standard: ELP 2 Participate in academic conversations ELP 4 Construct a claim with reasons and evidence
5th Grade	5th Grade Lesson	Space Systems: Earth's Stars and Solar System Standard: Gather and analyze data to communicate understanding of space systems: Earth's stars and solar system.  ELP Standard:  ELP 4 Construct a claim with reasons and evidence ELP 6: Analyze and critique the arguments of others orally and in writing
6th Grade	6th Grade Lesson  Lesson Plan  Student Guide	Structure and Function and Information Processing Standard: Gather, analyze, and communicate evidence of the relationship between structure and function in living things.  ELP Standard:  ELP 4 Construct a claim with reasons and evidence
7th Grade	7th Grade Lesson Lesson Plan	Structure and Properties of Matter Standard: Gather, analyze, and communicate evidence of the structure, properties, and

	Student Guide Evaluating Claims	interactions of matter.  ELP Standard:  ELP 4 Construct a claim with reasons and evidence
8th Grade	8th Grade Lesson	Natural Selection and Adaptations Standard: Gather, analyze, and communicate evidence of natural selection and adaptations. ELP Standard: ELP 5 An ELL can conduct research and evaluate and communicate findings to answer questions or solve problems.
High School	HS Earth and Space Lesson	Sustainability Standard: Gather, analyze, and communicate evidence to describe the interactions between society, environment, and economy.  ELP Standards:  ELP 2 Participate in academic conversations  ELP 4 Construct a claim with reasons and evidence
High School	HS Life Science	Heredity: Inheritance and Variation of Traits  Standard: Gather, analyze, and communicate evidence of the inheritance and variation of traits.  ELP Standards:  ELP 4: Construct a claim with reasons and evidence ELP 6: Analyze and critique the arguments of others orally and in writing
High School	HS Physical Science	Forces and Interactions Standard: Gather, analyze, and communicate evidence of forces and interactions. ELP Standards: ELP 2 Participate in academic conversations ELP 3 Discuss and write about academic topics ELP 4 Construct a claim with reasons and evidence